

DETAILED ACTION

1. A response was received on 10 September 2008. By this response, Claims 1, 2, 4, 5, 8, 11, and 14-16 have been amended. Claims 9 and 12 have been canceled. New Claim 17 has been added. Claims 1, 2, 4-8, 10, 11, and 13-17 are currently pending in the present application.

Response to Arguments

2. Applicant's arguments filed 10 September 2008 have been fully considered but they are not persuasive.

Claims 1, 2, 4-7, 9, 10, 12, and 13 were rejected under 35 U.S.C. 102(b) as anticipated by Kanevsky et al, US Patent 5897616. Claims 8, 11, and 14 were rejected under 35 U.S.C. 103(a) as unpatentable over Kanevsky. Claims 15 and 16 were rejected under 35 U.S.C. 103(a) as unpatentable over Kanevsky in view of Kashani, US Patent Application Publication 2002/0165894.

With specific reference to the rejection of Claim 1, Applicant again argues that Kanevsky does not meet the limitation of delivering the one-time challenge phrase to the station for the user to speak, and that Kanevsky instead "requires the user to answer the question and not repeat the question" (pages 11 and 12 of the present response). However, the Examiner again notes that Claim 1 never explicitly recites that the spoken response to the challenge phrase is the challenge phrase itself repeated

back by the speaker, which Applicant acknowledges as correct (see page 11 of the present response). The Examiner again notes that the claim more broadly recites “a spoken response from the user to said delivered one-time challenge phrase”; the claim does not require that the response be the phrase itself. Although the claim also recites that the delivered challenge phrase is “for the user to speak”, there is no recitation in the claim that requires the phrase actually be spoken. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Examiner again notes that Claims 15 and 16 do recite receiving “a spoken response from the user **of** said delivered one-time challenge phrase” (emphasis added) or similar language. The Examiner further notes that the term “matching” has been given its broadest reasonable interpretation, i.e. “corresponding to”. Although Applicant argues that only the repetition of a phrase could be considered a match to the phrase (page 11), the Examiner respectfully disagrees, noting that a correct answer to a question (as in Kanevsky, column 6, lines 34-39, for example) would correspond to the question and therefore match the question. It is noted that Applicant’s representative appeared to agree with such an interpretation of the term “matching” during the 10 December 2008 telephonic interview.

Applicant further argues that, even if Kanevsky does inherently include a language rule (which Applicant has acknowledged in response to the Examiner’s previous arguments, see page 11 of the present response where “[n]o issue is taken in this respect”), Kanevsky nevertheless “has a different language rule” and that the

system of Claim 1 “generates a one-time challenge phrase that is a one-time security pass phrase and must have a high degree of randomness so that each generated one-time challenge phrase should rarely, if ever, be generated again” (page 12 of the present response). However, the Examiner notes that the features upon which applicant relies (i.e., the detailed “language rule” discussed above) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In the telephonic interview conducted 10 December 2008, Applicant’s representative submitted the related argument that the system of Kanevsky only has a limited number of questions, and alleged that the questions in the system of Kanevsky can only have the “specific information” as their answers. Again, the Examiner notes that there is nothing in the claims that requires these additional alleged features and/or distinctions. Further, the Examiner submits that Kanevsky discloses what is claimed, namely, for example, in Claim 1, “a first data base having a plurality of words and language rules for randomly generating one-time challenge phrases” (see Kanevsky, column 6, lines 25-29 as previously cited, where a random question is generated “utilizing the specific information from the identified user’s database”; see also column 4, lines 45-50, where new questions can be added; see further Figure 4 and column 10, lines 18-53, where questions can be created from dynamic information provided in real time). The Examiner further disputes Applicant’s characterization of Kanevsky requiring the disclosed “specific information” as the answer to the question (as alleged in the telephonic interview), noting that Kanevsky

never discloses such a limitation but only more generally describes the questions as being generated "utilizing the specific information" (see column 6, lines 25-29 as cited) or "based on the information" in the user database (see Abstract; see also column 3, lines 29-32). These descriptions do not limit the disclosure in the manner suggested by the Applicant.

Regarding Claim 2, Applicant makes similar arguments as set forth with respect to Claim 1, although Applicant does not provide any specific evidence in relation to those arguments (see page 12 of the present response). These arguments have been addressed above. Similarly, Applicant asserts that Claims 4, 5, 11, and 13 are allowable for similar reasons (pages 12-13 of the present response).

Regarding Claims 6 and 7, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicant merely alleges that Kanevsky "does not provide any teaching that the user is to select the random question" (pages 12-13 of the present response); however, Applicant provides no evidence in support of this allegation. Further, the Examiner notes that the claims only require that a user "selects a word phrase as a private and personal challenge phrase" but does not require any use of such private and personal challenge phrase, where it appears that the personal and private challenge phrase is distinct from the randomly generated one-time challenge phrases. The Examiner submits that Kanevsky does disclose what is claimed, namely that the user selects a word phrase as a private and personal

challenge phrase (see, for example, column 6, lines 14-16, where the user can be identified by a keyed-in code, and column 10, lines 1-9, where the user enters a password).

Regarding the rejection of Claims 8 and 11, Applicant purports to challenge the finding of Official notice of the fact that the use of a session time out is well known and requests an affidavit under 37 CFR 1.104(d)(2) from the Examiner as evidence (see page 13 of the present response). However, as per MPEP § 2144.03(C), to adequately traverse a finding of Official notice, Applicant "must specifically point out the supposed errors in the examiner's action, which would include stating **why** the noticed fact is not considered to be common knowledge or well-known in the art. See 37 CFR 1.111(b)" (emphasis added). The Examiner notes that Applicant has not provided any explanation or evidence as to why the noticed fact would not be considered to be well known. Therefore, regarding Claims 8 and 11, the well-known in the art statement is taken to be admitted prior art because Applicant's traverse of the Examiner's assertion of Official notice was inadequate. Further, the Examiner notes that Applicant has not traversed the assertion of Official notice with reference to Claim 14 regarding the use of encryption and/or digital signatures and therefore these well-known in the art statements are also taken to be admitted prior art. See MPEP § 2144.03(C).

Regarding Claims 10 and 13, Applicant notes a feature of the claim but does not attempt to point out any distinction between the claim and the disclosure of Kanevsky (see page 13 of the present response). The Examiner again submits that Kanevsky discloses that the phrase is from a language subset specific to a subject area (column

6, lines 25-29; see also column 7, line 41-column 8, line 15, as previously cited, where the subject area is the user's personal information, for example; see also Figure 4 and column 10, lines 18-53 for further detail).

Regarding independent Claims 15-17, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argues that, in Kanevsky, there is "no database having a plurality of words and language rules for generating one-time challenge phrases" (page 14 of the present response). The Examiner respectfully disagrees, noting that Kanevsky does disclose a database from which random one-time challenge phrases are generated using words and language rules (see column 6, lines 25-29 as previously cited). Although Applicant asserts that the questions in the described section "are previously programmed into the server" (page 14 of the present response, citing column 7, lines 41-63, of Kanevsky), the Examiner disagrees with this interpretation. The cited portion only discloses pre-enrollment of the user and determining the specific information in the user database (see Kanevsky, column 7, lines 41-63), but this is comparable to the generation of the language rules and words that are stored in the database, rather than the pre-storing of the randomly generated challenge phrases (corresponding to the randomly generated questions described, for example, at Kanevsky, column 6, lines 25-29 as previously cited). Further, Kanevsky explicitly discloses that new questions (i.e. phrases) can be generated dynamically (see

column 4, lines 45-50, where new questions can be added; see also Figure 4 and column 10, lines 18-53, where questions can be created from dynamic information provided in real time). Additionally, even assuming *arguendo* that Kanevsky did not disclose generation of random phrases or a database having the words and language rules for generating challenge phrases, Kashani also discloses a database having language rules and words for generating one-time challenge phrases (see paragraphs 0118-0119). Applicant argues that because of the above reason (Kanevsky allegedly does not disclose a database as claimed), then "any modification of Kanevsky with the teachings of Kashani would not result in the claimed apparatus" (page 14 of the present response). However, this does not appear to follow logically from Applicant's above reasoning, and Applicant provides no evidence or explanation in support of this conclusion.

Applicant further argues that the cited portion of Kanevsky does not disclose a biometric model of a user (see pages 14-15 of the present response, citing column 6, lines 16-24). However, the Examiner respectfully but emphatically disagrees, noting that the cited portion of Kanevsky explicitly discloses a biometric model of a user (where Kanevsky explicitly discloses "an acoustic model... pertaining to that user", column 6, lines 21-22; see also throughout the disclosure of Kanevsky describing acoustic, i.e. biometric, specifically voice, models of the user). Additionally, even assuming *arguendo* that Kanevsky did not disclose a biometric model, Kashani also discloses a biometric model of a user (see paragraphs 0118-0119, disclosing not only speech recognition biometric models but also additional biometric models such as fingerprint and face

prints). Applicant argues that because of the above reason (Kanevsky allegedly does not disclose a biometric model as claimed), then "any modification of Kanevsky with the teachings of Kashani would not result in the claimed apparatus" (pages 14-15 of the present response). However, this does not appear to follow logically from Applicant's above reasoning, and Applicant provides no evidence or explanation in support of this conclusion.

Applicant additionally argues that Kashani "records the vocabulary of the user to construct a sentence of words in random order" and that Claim 15 "generates a one-time challenge phrase from words (e.g. a dictionary) and language rules and not a limited set of user recorded words" (page 15 of the present response, not relying upon any specific evidence but appearing to reference the disclosure of Kashani, paragraphs 0118-0119). However, there is nothing in the claim that requires the words in the database to be a "dictionary" as Applicant alleges, and the Examiner submits that a limited set of words would nonetheless meet the claim limitation of a database having a plurality of words that are used for generating challenge phrases. Further, the Examiner notes that Kanevsky also discloses the recited database as detailed above (see Kanevsky, column 6, lines 25-29 and elsewhere as previously cited). Applicant also asserts that Kashani rejects access if a word is mispronounced, but that Claim 15 uses speaker verification and that mispronunciation does not affect the biometric match (page 15 of the present response, again not citing any specific evidence). However, the Examiner notes that Claim 15 uses both speaker verification and speech verification (i.e. the former referring to the claimed matching the spoken response to a stored

biometric model and the latter referring to the claimed matching of the spoken response and the challenge phrase). While mispronunciation may not affect the biometric match, i.e. the speaker verification, mispronunciation would likely affect the speech recognition match, i.e. the verification that the words of the response match the words of the challenge phrase. Therefore, this argument appears to be spurious.

Additionally, in response to applicant's argument that requiring a user to speak a question is contrary to the teachings of Kanevsky (page 15 of the present response), the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Although Applicant asserts that the Examiner proposed that the combined system would require the user to speak the question (page 15 of the present response), the Examiner notes that this was not, in fact, what was described in the previous rejection. Rather, the Examiner previously described the application of the general teachings of Kashani (requiring a spoken response to be the same as the challenge phrase for the reasons previously cited, namely to prevent impersonation attacks, Kashani, paragraphs 0044, 0048, 0119) to the system of Kanevsky, thus resulting in a system where both speech recognition and speaker recognition are performed (Kanevsky, column 6, line 35- column 7, line 12) on a response that is a repetition of the challenge phrase (Kashani, paragraphs 0118-0119). See also the other previously cited art which was relied upon

for additional disclosure of systems using random phrases for a user to speak (see Anderson, Jr.; Vensko; and San Martin et al, for example, as cited in the previous Office action).

Therefore, for the reasons detailed above, the Examiner maintains the rejections as set forth below.

Claim Objections

3. Claim 11 is objected to because of the following informalities:

Claim 11 has been amended to recite "in response said first signal". It appears that "to" should be reinserted between "response" and "said".

Appropriate correction is required.

4. Applicant is advised that should claim 17 be found allowable, claim 15 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

5. Although the amendments to the claims have addressed some of the issues of indefiniteness, other issues remain. The rejection of Claims 1, 4-6, 8, 9, 11, 12, 14, and 16 are withdrawn in light of the amendments to (or cancellation of) the claims. Claims 10, 13, and 15 remain rejected under 35 U.S.C. 112, second paragraph, as set forth below.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 10, 13, 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 and 13 each recite the limitation "said randomly generated one-time challenge phrase is a language subset specific to a subject area"; however, this is generally unclear, as it is not clear from the way the terms "language subset" have been used in the specification how a phrase itself could be a language subset. It appears that there may be language missing from the limitation.

Claim 15 recites the limitation "said stored biometric model for said authorized user" in lines 19-20. It is not clear to which of the stored biometric models or authorized users this is intended to refer, noting that there are a plurality of biometric models and a plurality of authorized users recited in lines 7-9.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 4-7, 10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanevsky et al, US Patent 5897616.

In reference to Claim 1, Kanevsky discloses a biometric security system including a station for receiving input information, which is representative of a user, from the user and generating a signal responsive thereto (column 6, lines 4-11, for example); a database having a plurality of words and language rules for randomly generating one-time challenge phrases (column 6, lines 25-29); a database having biometric models of users (column 6, lines 16-24); and a controller that receives and validates the signal as representative of the user, where the controller communicates with the database that generates one-time challenge phrases for the user to speak (column 6, lines 25-29), and communicates with the station to receive a spoken response and generate a second signal that represents the response (column 6, lines 34-37), to validate voice information by speaker recognition (column 6, line 66-column 7, line 12) and verify voice information by speech recognition (column 6, lines 35-65), and to validate the spoken response to the challenge as representative of the user if the validation by speaker recognition and verification by speech recognition succeed (column 7, lines 14-25).

Claims 2 and 7 are directed to methods corresponding substantially to the system of Claim 1, and are rejected by a similar rationale, noting further that Kanevsky also discloses a private and personal challenge phrase (see column 6, lines 14-16; column 10, lines 1-9).

In reference to Claim 10, Kanevsky further discloses that the phrase is from a language subset specific to a subject area (column 6, lines 25-29; see also column 7, line 41-column 8, line 15).

In reference to Claim 4, Kanevsky discloses a biometric security system including a station for receiving input information, which is representative of a user, from the user and generating a first signal responsive thereto (column 6, lines 4-11, for example); a database having a plurality of words and language rules for randomly generating one-time challenge phrases (column 6, lines 25-29); a database storing a biometric model of a user (column 6, lines 16-24); and a controller receiving and comparing the first signal to the stored biometric model and validating the first signal if the first signal matches the stored model (column 6, line 66-column 7, line 12), where the controller further randomly selects and forwards a word phrase as a challenge for a user to speak (column 6, lines 25-29), receives and compares with the challenge a spoken response to the challenge (column 6, lines 35-65), and verifies the response as matching the challenge (column 6, lines 35-65), and where the controller additionally validates the response if the response matches the stored model (column 6, line 66-column 7, line

12), and the controller issues an authentication signal if both the response matches the phrase and the response is representative of the user (column 7, lines 14-25).

Claims 5 and 6 are directed to methods corresponding substantially to the system of Claim 4, and are rejected by a similar rationale, noting that Kanevsky discloses a multiplicity of users and stored biometric models (column 6, lines 16-24), and noting further that Kanevsky also discloses a private and personal challenge phrase (see column 6, lines 14-16; column 10, lines 1-9).

Claim 13 recites limitations also recited in Claim 10 and is rejected by a similar rationale.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanevsky.

In reference to Claims 8 and 11, Kanevsky discloses everything as described above in reference to Claims 2 and 5, respectively. Kanevsky does not explicitly disclose establishing a session time out limit; however, Official notice is taken, and it has been admitted as prior art due to the inadequate traversal of such Official notice,

that it is well known in the art to establish a session time out in order to require that authentications must take place within a specific time period, so that the probability of an imposter being able to take more sophisticated deceptive actions is decrease. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the methods of Kanevsky to include a time out, in order to increase security and to realize the above noted predictable result.

In reference to Claim 14, Kanevsky discloses everything as described above in reference to Claim 5. Kanevsky does not explicitly disclose encrypting or digitally signing the spoken response. However, Official notice is taken, and it has been admitted as prior art due to the lack of traversal of such Official notice, that it is well known in the art to encrypt data when privacy of that data is needed and/or if that data will be sent over an insecure channel. Further, Official notice is taken, and it has been admitted as prior art due to the lack of traversal of such Official notice, that it is well known in the art to use a digital signature when it is necessary to verify the integrity of data, i.e. to make sure that the data has not been altered. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Kanevsky to include encryption, in order to increase the privacy and security of the data, and to include a digital signature, in order to allow the integrity of the data to be verified.

12. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanevsky in view of Kashani, US Patent Application Publication 2002/0165894.

In reference to Claims 15-17, Kanevsky discloses a speech biometric security system including a station for receiving input information, which is representative of a user, from the user and generating a signal responsive thereto (column 6, lines 4-11, for example); a database having a plurality of words and language rules for randomly generating one-time challenge phrases (column 6, lines 25-29); a database having biometric models of users (column 6, lines 16-24); and a controller that receives and validates the signal as representative of the user, where the controller communicates with the database that generates one-time challenge phrases for the user to speak (column 6, lines 25-29), and communicates with the station to receive a spoken response and generate a second signal that represents the response (column 6, lines 34-37), to process the response by speaker recognition and issue a first validation signal (column 6, line 66-column 7, line 12) and simultaneously process the response by speech recognition and issue a second validation signal (column 6, lines 35-65), and issue a positive authentication signal in response to the first and second validation signals (column 7, lines 14-25). However, Kanevsky does not explicitly disclose that the spoken response is the challenge phrase spoken exactly.

Kashani discloses a voice recognition system (paragraph 0048) in which a sentence is constructed from random words taken from the recorded vocabulary of the user (paragraph 0118) and the user is required to speak the random sentence exactly in order to be authenticated (paragraphs 0118-0119). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the systems of Kanevsky by requiring that the spoken response be exactly the same as

the challenge phrase, in order to prevent an attack in which a user's speech is previously recorded and played back to impersonate the user (see Kashani paragraphs 0044, 0048, 0119).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. The Microsoft Press Computer Dictionary describes the well-known nature of the use of a timeout, especially in reference to authentication operations.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A. Davis whose telephone number is (571)272-3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Emmanuel L. Moise/

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